In the Claims

1. (Currently Amended) A welding-type system comprising:

a welding-type component configured to present an electrode to a weld; and

a cooling system configured to automatically circulate coolant through at least the welding-type component upon activation of the welding-type component and maintain coolant circulation upon deactivation of the welding-type component if a measured coolant temperature exceeds a threshold.

2. (Original) The welding-type system of claim 1 further comprising a control circuit adapted to electronically communicate with a power source and the welding-type component to affect circulation of coolant through at least the welding-type component and automatically activate the cooling system when the welding-type component is activated and maintain coolant circulation if a temperature of the coolant exceeds a first set point temperature.

3. (Original) The welding-type system of claim 1 wherein the cooling system is further configured to circulate coolant through the welding-type component for a set period of time after deactivation of the welding-type component.

4. (Original) The welding-type system of claim 3 wherein the cooling system is further configured to automatically terminate circulation when the set period of time expires or temperature of coolant is below a second set point temperature.

5. (Original) The welding-type system of claim 1 wherein the welding component includes a welding torch designed to receive a water hose for circulation of water therein.

6. (Original) The welding-type system of claim 5 wherein the welding torch further includes a jacket radially spaced from the tubular handle, the jacket configured to facilitate ingress and egress of water in thermal proximity to the tubular handle so as to absorb and dissipate heat thermally translated to the coolant from the tubular handle.

7. (Original) The welding-type system of claim 1 wherein the cooling system further comprises a coolant tank, a pump, a motor assembly, a heat exchanger, and a fan

operationally connected to one another to circulate coolant to the welding-type component automatically upon activation and during activation of the welding-type component.

8. (Original) The welding-type system of claim 7 wherein the heat exchanger includes a coiled radiator and the cooling system further includes a check valve biased to prevent coolant flow when the welding-type component is disconnected from a power source.

9. (Original) The welding-type system of claim 1 wherein the power source and the cooling system are disposed within a common enclosure.

10. (Original) The welding-type system of claim 1 wherein the activation includes power delivered to the output.

11. (Original) The welding-type system of claim 1 wherein the cooling system includes a pressure sensor to provide feedback as to coolant pressure through the welding-type component.

12. (Currently Amended) A welding apparatus comprising:

a power source;

a cooling system designed to circulate coolant;

a welding torch connected to the power source and the cooling system; and

a controller configured to regulate the cooling system such that upon activation of the welding torch coolant is automatically caused to at least flow through the welding torch and monitor a temperature of the coolant ~~continue to circulate~~ after deactivation of the welding torch and continue to circulate coolant until a temperature of the coolant falls below a predetermined value.

13. (Original) The welding apparatus of claim 12 wherein the controller is further configured to transmit a circulation commencement signal to the cooling system when an activation signal is detected.

14. (Original) The welding apparatus of claim 12 wherein the controller is further configured to transmit a circulation commencement signal to the cooling system automatically upon manual override mode detection.

15. (Original) The welding apparatus of claim 12 wherein the controller is further configured to repeatedly detect a coolant temperature signal and if coolant temperature exceeds a threshold, transmit a circulation maintenance signal to the cooling system independent of welding torch activation status.

16. (Original) The welding apparatus of claim 12 wherein the controller is further configured to maintain coolant circulation until expiration of a time period following deactivation of the welding torch.

17. (Original) The welding apparatus of claim 12 further configured for TIG welding.

18. (Currently Amended) A method for cooling a welding-type component, the method comprising the steps of:

detecting activation of a welding-type component;

upon activation, automatically circulating coolant through the welding-type component; ~~and~~

upon deactivation, monitoring coolant temperature; and

maintaining coolant circulation through the welding-type component ~~for a limited period when the welding-type component is deactivated~~if the coolant temperature exceeds a threshold.

19. (Currently Amended) The method of claim ~~17~~ 18 further comprising the step of maintaining coolant circulation until expiration of a specified time period following deactivation of the welding type component.

20. (Currently Amended) The method of claim ~~17~~ 18 further comprising the step of maintaining coolant circulation until a temperature of the welding-type component falls below a prescribed temperature.

21. (Currently Amended) The method of claim ~~17~~ 18 further comprising the step of maintaining a substantially constant flow of the coolant circulating through the welding-type component.

22. (Currently Amended) The method of claim ~~17~~ 18 further comprising the step of maintaining coolant circulation until a temperature of the coolant circulating ~~with in~~within the welding-type component falls below a prescribed temperature.

23. (Currently Amended) A welding-type apparatus comprising:

means for providing welding-type power;

means for outputting welding-type power to an output area;

means for detecting activation of the means for the outputting welding-type power; ~~and~~

means for automatically circulating coolant through at least the means for providing welding-type power upon activation of the means for outputting welding-type power ~~and maintaining coolant circulation until coolant temperature falls below a certain set point;~~

means for detecting deactivation of the means for outputting welding-type power;

means for determining coolant temperature; and

means for maintaining coolant circulation until coolant temperature falls below a certain set point.